

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/625,348

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (Currently Amended) A method of generating a color conversion table for converting first color data D to be processed by a first device into second color data D' to be processed by a second device, comprising the steps of:

determining a first colorimetric value of a first color obtained by processing the first color data D with the first device;

determining a second colorimetric value of a second color obtained by processing the second color data D' with the second device;

establishing a color conversion table such that said first colorimetric value is equalized to said second colorimetric value;

setting establishing a constraint condition to constrain color conversion relationships of said color conversion table between portions of said first and second color data D and D' after establishing the color conversion table; and

generating a modifying the color conversion table between at least portions of said first and second color data D[[,]] and D' according to said constraint-conditions condition for ; and generating a new color conversion table between remainders of said color data D, D' in colorimetric association therewith.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/625,348

2. (Currently Amended) A method according to claim 1, wherein said constraint condition comprises a condition for constraining a relationship for converting ~~at least one primary color data of at least one primary color.~~

3. (Currently Amended) A method according to claim 1, wherein said constraint condition comprises a condition for constraining a relationship for converting ~~at least one secondary color data of at least one secondary color.~~

4. (Currently Amended) A method according to claim 1, wherein said constraint condition comprises a condition for ~~saving~~ equalizing halftone dot area percentages of particular ranges in said ~~at least~~ portions of said first and second color data D[[],] and D'.

5. (Currently Amended) A method according to claim 4, wherein said particular range is established in at least one of a highlight area and/or of said first and second color data D and D' and a shadow area of said first and second color data D[[],] and D'.

6. (Currently Amended) A method according to claim 4, wherein said constraint condition comprises a condition for equalizing the halftone dot area percentages of said particular ranges in said ~~at least~~ portions of said first and second color data D[[],] and D', and a

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/625,348

condition for gradually shifting halftone dot area percentages of junction ranges between said particular ranges and other ranges from the halftone dot area percentage of said first color data D to the halftone dot area percentage of said second color data D'.

7. (Original) A method according to claim 6, wherein said condition for gradually shifting the halftone dot area percentages of the junction ranges comprises a condition for interpolating the halftone dot area percentages of said particular ranges and the halftone dot area percentages of the junction ranges.

8. (Currently Amended) A method according to claim 1, wherein said constraint condition comprises a condition for saving equalizing dot gains of said at least portions of said first and second color data D[[,] and D'].

9. (Currently Amended) An apparatus for generating a color conversion table for converting first color data D to be processed by a first device into second color data D' to be processed by a second device, comprising:

color conversion table establishing means for establishing a color conversion table such that a first colorimetric value of a first color is equalized to a second colorimetric value of a second color, said first colorimetric value being determined based on the first color obtained by processing the first color data D with the first device, said second colorimetric value being

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/625,348

determined based on the second color obtained by processing the second color data D' with the second device;

constraint condition setting means for setting a constraint condition of conversion relationships of said color conversion table between portions of said first and second color data D and D'; and

color conversion table generating modifying means for generating a modifying said color conversion table between at least said portions of said first and second color data D[[,] and D'] according to said constraint conditions condition, and generating a new color conversion table between remainders of said color data D, D' in colorimetric association therewith.

10. (Currently Amended) An apparatus according to claim 9, wherein said constraint condition setting means comprises:

constraint condition storage means for storing constraint conditions; and  
constraint condition selecting means for selecting the desirable constraint condition from said constraint condition storage means.

11. (Currently Amended) An apparatus according to claim 9, further comprising:  
color conversion table storage means for storing a color conversion table in colorimetric association between all said first and second color data D[[,] and D'];

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/625,348

said color conversion table generating modifying means comprising means for modifying said color conversion table stored in said color conversion table storage means into a new color conversion table based on said constraint condition.

12. (Currently Amended) An apparatus according to claim 11, wherein said color conversion table storage means comprises:

a first profile storage unit for storing a first profile representing a conversion relationship between said first color data D and colorimetric data; and  
a second profile storage unit for storing a second profile representing a conversion relationship between said colorimetric data and said second color data D'.

13. (Currently Amended) An apparatus according to claim 12, wherein said first profile comprises a profile established depending on printing conditions of ~~a printing machine~~ said first device, and said second profile comprises a profile established depending on output conditions of ~~a printer~~ said second device.

14. (Currently Amended) An apparatus for generating a proof by converting image data composed of first color data D to be processed by a first device into image data composed of second color data D' to be processed by a second device, using a color conversion table, and

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/625,348

generating a proof of an image produced by said first device with said second device,  
comprising:

color conversion table establishing means for establishing a color conversion table such  
that a first colorimetric value of a first color is equalized to a second colorimetric value of a  
second color, said first colorimetric value being determined based on the first color obtained by  
processing the first color data D with the first device, said second colorimetric value being  
determined based on the second color obtained by processing the second color data D' with the  
second device;

constraint condition setting means for setting a constraint condition of conversion  
relationships of said color conversion table between portions of said first and second color data  
D and D';

color conversion table generating modifying means for generating a modifying said color  
conversion table between at least portions of said first and second color data D[.,.] and D'  
according to said constraint conditions condition, and generating a new color conversion table;

color converting means for converting said first color data D into said second color data  
D' using said color conversion table generated by said color conversion table generating  
modifying means; and

proof output means for outputting said proof based on said second color data D'.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/625,348

15. (Original) An apparatus according to claim 14, wherein said constraint condition setting means comprises:

constraint condition storage means for storing constraint conditions; and

constraint condition selecting means for selecting the constraint condition from said constraint condition storage means.

16. (Currently Amended) An apparatus according to claim 14, further comprising:

color conversion table storage means for storing a color conversion table in colorimetric association between ~~all~~ said first color data  $D[.,.]$  and said second color data  $D'$ ;

said color conversion table generating modifying means comprising means for modifying said color conversion table stored in said color conversion table storage means into a new color conversion table based on said constraint condition.

17. (Original) An apparatus according to claim 14, wherein said proof output means comprises a printer.

18. (New) A method according to claim 1, wherein said constraint condition is set independently of said output characteristics and printing conditions of the first and second devices.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Patent Application No. 09/625,348

19. (New) An apparatus according to claim 9, wherein said constraint condition setting means sets said constraint condition independently of said output characteristics and printing conditions of the first and second devices.

20. (New) An apparatus according to claim 14, wherein said constraint condition setting means sets said constraint condition independently of said output characteristics and printing conditions of the first and second devices.